

REMARKS

Claims 9 and 10 have been amended to emphasize that the gel filling is in intimate contact with the bottom, front and back walls.

Basis for the amendment is found in the specification and drawings as originally filed with particular reference, for example, to Figure 3.

Claim 10 has also been amended to provide antecedent basis for “at least one” vapor restricting aperture and to emphasize that the vapor restricting aperture is of predetermined constant size.

New independent claim 11 includes many of the limitations of claim 10 including emphasis that the gel filling is in intimate contact with the bottom, front and back walls vapor exit aperture is of predetermined, constant size. While avoiding the objected to terminology, the claim emphasizes that the cartridge housing is one piece. Basis for the one piece construction is found on page 12, line 16 and many other instances in the specification.

In contesting the rejection under 35 USC 112, it is pointed out that the imperforate nature of the top wall except for the vapor exit aperture and, the limitation that the top wall is rigidly joined to the front, back, left and right walls would be apparent to the man of ordinary skill from a review of the specification and drawings as originally filed. Figure 1, for example, shows the imperforate (unbroken) structure of the top wall except for the vapor exit aperture, (as well as the imperforate vapor restrictors from which the top wall is formed), and the passage on page 12 line 14/15 states that the cartridge 10 is made out of thin gauge metal implying joint rigidity. Thus, although such amendment is believed unnecessary, the specification has been amended to provide terminological basis for those claimed limitations, as apparently sought by the examiner.

Accordingly, the rejection of claims 9 and 10 under 35 USC 112 is inappropriate.

In contesting the rejection of claims 4,5, 9 and 10 under 35 USC 103 as being

unpatentable over Orlov, the arguments made the prior response are incorporated herein by reference.

The examiner states that Orlov teaches that means for regulating the size of the of the aperture is provided as a snuffer plate which can be moved (by the user) to open and close the aperture in the aperture plate. As stated in the prior response, the Orlov approach of permitting the user to change the aperture size is intentionally avoided in the claimed invention which requires that the cartridge be self-regulating with the vapor exit aperture being of predetermined constant size (claims 9-11). In contrast to the snuffer plate of Orlov, the “removable lid” cannot be used as a means to regulate the size of the vapor exit aperture but merely to uncover the aperture completely or to cover the aperture completely preventing combustion entirely.

Although, on page 4, line 3, the examiner recognizes that Orlov does not teach that the aperture plate, (which the examiner incorrectly deems a top wall), is “rigidly” joined to the side walls, the examiner contends that the top wall is “rigidly” joined to the other walls because the metal of the top wall is “rigid” and touches the front, back, left and right walls. However, in constructing the rejection, it is apparent that the examiner has completely overlooked or disregarded that, “rigidly” is an adverb modifying the verb “joined”, not a noun (or adjective), requiring that the top wall be immovably/inflexibly joined to the other walls -so as to maintain the effective shape of the vapor exit aperture constant.

As emphasized in the prior response, adjustment of the size of the vapor exit aperture would be extremely undesirable as defeating optimal factory settings and possibly introducing a potentially hazardous condition .

Furthermore, claims 9-11 now emphasize that the gel filling is in intimate contact with at least the bottom, front and back walls of the cartridge. In contrast, as can clearly be seen in Fig 3 of Orlov, the gel is not, and cannot, be in intimate contact with front, back and bottom walls of the drawer 30, as the gel is contained entirely by walls of the reservoir 32 which, again in contrast to the Examiner’s assertion, do not touch the aperture plate but are spaced apart a small distance therefrom, actually resting on a raised transverse rib portion at the top of the left hand side of the drawer, as shown in

Figure 3.

In addition, Orlov does not teach that the drawer structure or the reservoir with alleged vapor restrictors are one piece, as required by claim 11.

In rejecting claims 4, 5, 9 and 10 under 35 USC 103 as unpatentable over Ferrara in view of Orlov, the examiner observes that the phrase “for a domestic fireplace” is a statement of intended use. The phrase indicates that the article is suitable for use in the domestic environment - the environment of intended use- an environment in which additional safety considerations that the cartridge was designed to meet are particularly significant. As pointed out in the prior response, use in a domestic fireplace introduces criticality of design in relation both to efficiency of combustion and safety considerations which are otherwise unimportant in an outside environment. Thus, the claimed limitations are of particular significance in the home and, particularly in respect of safety, are not met by the structure taught by the primary reference, as adjustment by an inexperienced user would produce inefficient combustion and possibly a potentially hazardous condition.

Other distinctions from Orlov and Ferrara teachings, mentioned above and in the prior response, are incorporated herein by reference.

For example, as pointed out above, Orlov aperture plate does not contact the top of the reservoir which is the only structure taught by Orlov as possibly having gel in intimate contact with front, rear and bottom walls, now emphasized in claims 9-11.

As previously pointed out, Ferrara does not teach that the top wall (Claim 9) or fuel receiving chamber (claims 10 and 11) are imperforate except for the elongate rectangular vapor exit aperture. In contrast, to the claimed invention, two rows of air entry vents are provided on respective opposite sides of the vapor exit aperture for the express purpose of accelerating burning to increase heat generation, clearly to be avoided as counter-productive in the cartridge of the claimed invention requiring a long burn time.

It is noted that the examiner persists in arguing that a means to permit the user to regulate the flame and aperture size as taught by Orlov is desirable. It is again stressed that, in contrast, such approach is specifically to be avoided by the claimed

invention in which the aperture is of predetermined constant size set by the manufacturer for optimal burning, visual effect and safe use in the home.

The examiner contends that the provision of a flat top is merely design choice, motivated by the skilled artisan's desire for, (in the examiner's personal view), a more streamlined appearance. Applicant contends that, It is simply impermissible to dismiss a structural limitation with important functional advantages on the wholly speculative basis that it might otherwise be adopted as a result of appeal to the eye. As stated previously, the flatness of the top is significant in preventing excessive, possibly explosively hazardous air/ vapor space above the gel, (as might occur with the dome shaped structure taught by Ferrara), particularly when the gel filled cartridge is initially ignited by an inexperienced person in the home fireplace.

As pointed out above, "rigidly" is an adverb modifying the verb "joined", as such meaning that the top wall and side walls are immovably/inflexibly joined together. In contrast, Ferrara teaches that the "top wall" is a lid, removable from the container as simply supported on top edge portions 58 of the fuel container which clearly does not meet either that claimed limitation or the "one piece" limitation of claim 11, which provides advantages of ease of handling and safe use.

Accordingly, it is submitted that the rejection under 35 USC 103 is inappropriate and that the claims now presented define patentable subject matter.

Favorable reconsideration of the application is requested.

Respectfully submitted,
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